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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,595	12/20/2005	Daisuke Tsuru	09812.0135-00000	9804
22852 7590 12/23/2008 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER HUNG, YUBIN	
			ART UNIT 2624	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/561,595	Applicant(s) TSURU ET AL.	
	Examiner YUBIN HUNG	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/20/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to because in Fig. 3 “TO 26, 32” should have been “TO 26, 36” (per P. 14, line 21 of the specification). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

3. Claim 2 is objected to because of the following informalities: “saod” in line 2 should have been “said”. Appropriate correction is required.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claim 1 (and similarly claims 12 and 13) is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 6 of copending Application No. 2005/0129112 in view of Kim (US 7,266,148). Specifically, claim 6 of the '112 application discloses all limitation of the instant claim 1 except that the use of complexity (a form of difficulty) is only applied to selected frames. However, Yamada discloses using complexity on all frames [Fig. 6; Fig. 10, refs. 43, 45, 47, 50 & 51] and the reasons for doing so is to further improve the coding result by having the quantization of all frames adapt to the frame content and to avoid loss of quality, as Yamada indicates in the last 6 lines of paragraph 22.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-11 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 1 (and similarly claim 13) recites the limitation "the quantization" in line 2 (respectively line 3). There is insufficient antecedent basis for this limitation in the claim. Dependent claims 2-9 are similarly rejected. [For claim 1 note that "quantization scale" is not the same as "quantization" and therefore does not provide antecedent basis. Similarly, in claim 13 "quantization scale calculation circuit" does not provide antecedent basis for "quantization scale".]

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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10. Claim 12 is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim recites a series of steps or acts to be performed, the claim neither transforms underlying subject matter nor positively ties to another statutory category that accomplishes the claimed method steps, and therefore does not qualify as a statutory process.

[Note: In preparing response to this Office action, Applicant is advised to consider the 08/15/08 Office memo available from:

http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/section_101_05_15_2008.pdf

or,

(from uspto.gov) click “Policy and Law”, “Patents”, “Memorandum to the Examining Corps”, “Clarification of “processes” under ... 101”.]

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

¹ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

² *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1, 2, 9, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada et al. (US 2002/0034246).

13. Regarding claim 1, and similarly claim 12, Yamada discloses:

- a specifying circuit for specifying a bit rate by which the encoded data is supplied for decoding at the time of the decoding based on the encoded data obtained by the encoding

[Fig. 10, ref. 49; Fig. 11; paragraphs 75-84, especially 79]

- an encoding difficulty detection circuit for detecting the difficulty of encoding of the processed data

[Fig. 10, refs. 43, 45 & 47 (in combination considered an encoding difficulty detection circuit); Fig. 11; paragraphs 75-84, especially 77]

- a quantization control circuit for controlling the quantization scale based on the bit rate specified by the specifying circuit and the encoding difficulty detected by the encoding difficulty detection circuit

[Fig. 10, refs. 10 & 51 (in combination considered a quantization control circuit); Fig. 11; paragraphs 75-84, especially 79]

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14. Regarding claim 13, note that in addition to the specifying, the encoding difficulty detection and the quantization control circuits Yamada further discloses

- a quantization scale calculation circuit for calculating the quantization scale
[Fig. 6, refs. 10-14 (in combination considered a quantization scale calculation circuit); Figs. 8 (for Fig. 6, ref. 14), 10 (for Fig. 6, ref. 13), 12 (for Fig. 6, ref. 10); see also corresponding paragraphs]
- a quantization circuit for quantizing the processed data based on the quantization scale calculated by the quantization scale calculation circuit
[Fig. 6, ref. 15]
- an encoding circuit for generating the encoded data by encoding the quantization result of the quantization circuit
[Fig. 6, ref. 16]

15. Regarding claim 2, Yamada further discloses using smaller quantization step for higher difficulty [paragraph 22, last 6 lines. Note that higher bit rate corresponds to smaller quantization step; see equation 3 on paragraph 19.]

16. Regarding claim 9, Yamada further discloses encoding multiple picture frames (e.g., video) [paragraph 4; note that MPEG is a video encoding standard.]

Allowable Subject Matter

17. The following is a statement of reasons for the indication of allowable subject matter:

A. Regarding claim 3, closest art of record Yamada discloses a method for setting quantization step according to measured bit rate and coding difficulty that avoids problems associated with setting and using a target bit rate [paragraphs 26 & 27]; Choi discloses using buffer fullness indicator (and distortion estimate) to allocate/re-allocate target bit rate in order to maintain picture quality of a video sequence [Fig. 3; Col. 6, lines 6-27]; Lightstone (US 2005/0084007) discloses using complexity and buffer fullness to allocate bits [Figs. 3 & 4]; and Chang et al. (US 2004/0234142) discloses a strategy for keeping the consumed bits close to the target bit allocation. However, while the above-cited references in combination disclose all limitations of claim 3, one would not be motivated to combine them since Yamada is designed to avoid setting target bit rate (and therefore avoiding problems associated with using them).

Conclusion and Contact Information

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Kim (US 7,266,148)

- Kuchibholta (US 5,731,835)

Note: Both uses buffer fullness information to set quantization steps.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUBIN HUNG whose telephone number is (571)272-7451. The examiner can normally be reached on 7:30 - 4:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yubin Hung/
Primary Examiner, Art Unit 2624